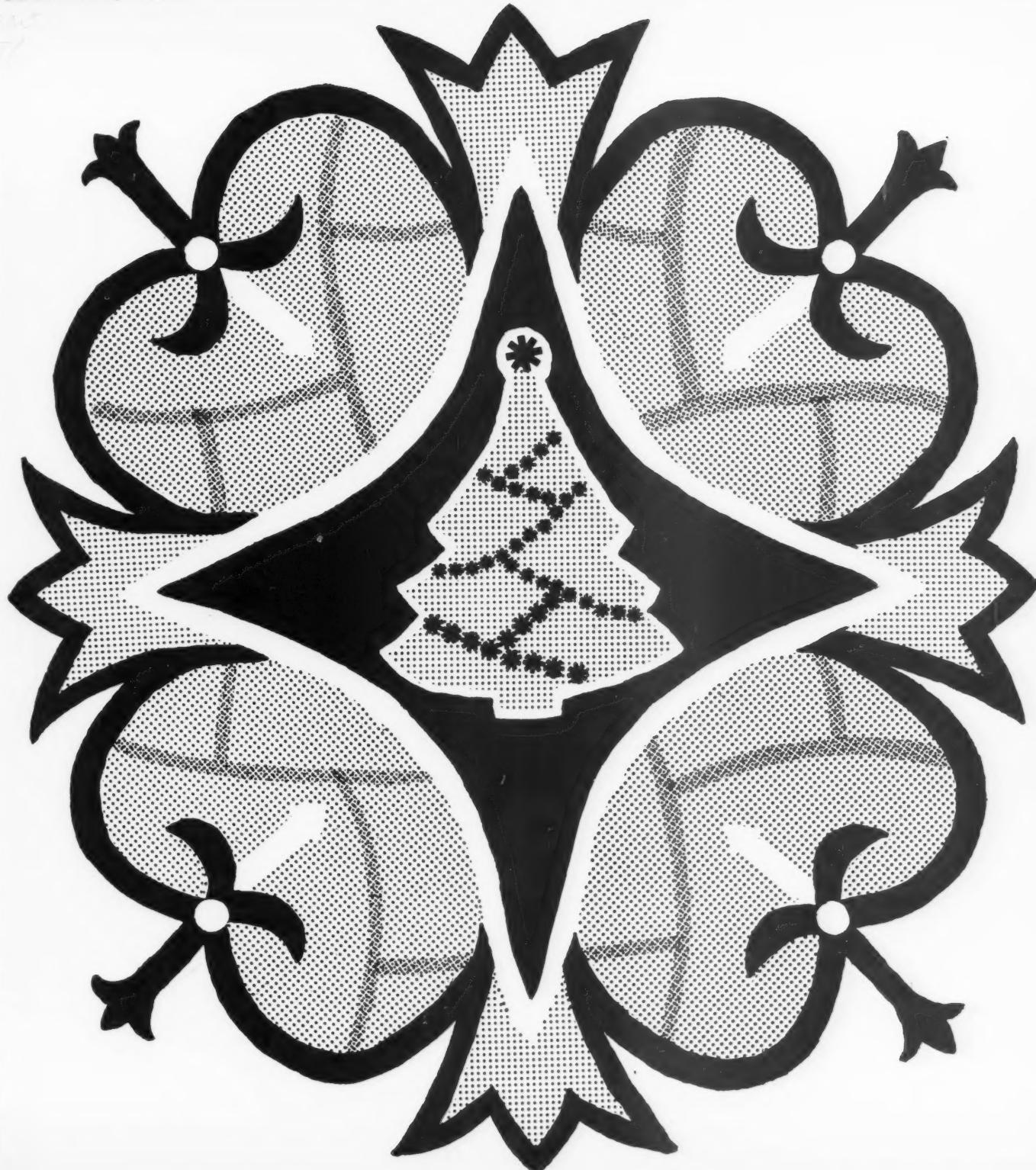


# Cornell Countryman

DECEMBER, 1960



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# A Union of Pasts

## Cornell Countryman

December, 1903—Vol. 1, No. 1 of the Cornell Countryman. "A Journal of Country Life—Plant, Animal, Human." The first article was written by L. H. Bailey whose title was "Director of the College of Agriculture.

Martha Van Rensselaer wrote an article in that first issue about her work as Supervisor of the Farmer's Wives Reading Course. "Dodder in New York Alfalfa Fields" was the title of J. L. Stone's initial article. The Editor-in-Chief was G. F. Warren.

It is hard to imagine how that early Countryman staff found their way around without having the buildings named after them to use as landmarks. But the Ag Quad wasn't really their headquarters.

The first Countryman office was in the basement of Morrill Hall. If you listen hard, you may still hear to happy "clacking" of Countryman typewriters amid the foreign language drills today.

A later home of the Countryman was, what is now, the radio shack—in the parking lot on the Bailey Hall-side of the old Minns Garden.

By 1921, the Countryman had changed from a digest-size to its present dimensions. An October, 1921 editorial explained that "The national advertisers would be much more apt to patronize our columns" with the larger size. That issue of the Countryman had 32 pages with 13 of them covered with ads. But that was the "Roaring 20's".

Two major changes later occurred. The Countryman moved to its present perch in the pent house of Roberts Hall. And the undergraduates took over the writing.

Today, 57 years after the first December issue, the Countryman has changed from "A Journal of Country Life—Plant, Animal, Human" to A Journal of Student Life—Mostly Human.

It is thought that two typewriters in the office were first used by the founders of the Countryman. It is interesting to wonder what the first Countryman Editor, G. F. Warren, would have thought about the copy that rolls out of those machines now.

## Norton Printing Company

The Norton Printing Company was founded by Edward Norton in 1882, who continued in business until his death in 1924. His son, Harry Norton and daughter, Sue Norton, operated the business until May of 1929 when it was purchased by its present owners Mr. and Mrs. Albert MacWethy.

For the first two years of the company's existence it was located on the second floor of the present Savings & Loan building. The company moved to its present location in 1884.

Seventeen members comprise the working staff of the company at this time with 14 years being the average length of service. The Countryman was printed at Nortons for several different years from 1903 to 1930 and has been done consistently by them for the last thirty years.

In the earlier part of the century The Countryman was set by hand and run off on hand-fed presses. In 1911 a linotype was purchased, which sets the type equal to the speed of seven hand compositors. As time progressed other machinery was added until now, so that today the magazine is run on automatic presses and folders and can be produced at a speed that at one time was thought impossible. Compositors of Nortons are affiliated with the International Typographical Union and the pressmen are in the Printing Pressmen and Assistants Union.

The Norton Printing Company's slogan is *Where service is a Habit* and they have prided themselves on living up to their slogan. In fact the reputation they have established in this regard can best be determined by talking to any purchasers of printing in the City of Ithaca. Students of both Cornell and Ithaca College have long since discovered that Norton's is the place to go whenever they have a problem or want service in a printing job.

Working with the various staffs of the Cornell Countryman has been extremely pleasant and many friendships have been made as a result.

*This issue of the Countryman brings together the past and present of a magazine and a printer. Together, they symbolize man's attempt to communicate—the presentation of the written word. And together they present six more words: Merry Christmas and Happy New Year.*

# Cornell Countryman

Vol. LVIII—No. 3

Founded 1903

Incorporated 1914

Member of Agricultural College

Magazines, Associated

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The Cornell Countryman is published monthly from October through May by students in the New York State Colleges of Agriculture and Home Economics, units of the State University of New York, at Cornell University. Entered as second-class matter, postage paid at Ithaca, New York and at additional mailing offices. Printing by Norton Printing Co. of Ithaca. Subscription rate is \$1.75 a year or two years for \$3.25; three years for \$4.50; single copies, 25 cents.

DECEMBER, 1960



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## Editorials

# Ag-Dom -- So What?

### Council as it was and is

IS AG-DOMECON Council Dying a Slow Death? was the title of a *Countryman* editorial in April, 1958. Based on the findings of a student poll, the editorial pointed out an almost complete lack of interest in, and information about, Ag-Dom on the part of the student body.

The editorial blamed this student state of mind on the inability of Ag-Dom to promote interest and provide information—Council apathy. A subsequent letter from the Ag-Dom president claimed that the guilt lay with the inability of students to broaden their interests and seek information—student apathy.

In the opinions of many present members of Ag-Dom and the student body, the same points of view—their bases and differences—are valid today. An indication was the Pomology Club's editorial in the November *Countryman*—“Does Ag-Dom Have a Future?”

Future, however, is a thing called “maybe”. Two other elements are more definite—the present and the past.

Ag-Dom as it is today is brought into focus once every two weeks at their regular meetings. The meeting of November 2nd, for example, progressed like the outline of many analyses of the Council.

Projects were discussed at the meeting, and many evaluations define Ag-Dom in terms of deeds. Such things as Swedish and Mexican Exchange, coffee hours, and a proposed club-officer training program were discussed.



Gary Harden, '61,  
president of Ag-Domecon Council

Fuller indications of the Council's substance and purpose, however, were brought out in discussing the Ag Hec Day square dance and the name-change referendum.

Seventy tickets were sold for the Barton Hall square dance. Of the Council members attending, only one came with a date. President Gary Harden, '61, blamed the small turn-out on bad timing, inadequate publicity, and poor support from Council members.

Student voters defeated a proposal to change the name of Ag-Dom to “Upper Campus Student Council” by only ten votes. Failures in timing and publicity were again noted. But since a majority of Council members were in favor of the change when it was first proposed, President Harden cited lack of member support as a major factor in the defeat.

During an interview with the *Countryman*, Gary Harden explained that those opposed to the name

change felt more change was needed. While he was definitely aware that a changed name was not an end in itself, Harden felt it was a good place to begin improvement.

Opposition also centered around the present name's long tradition. Harden recognized the tradition, but disputed its value. Ag-Dom has been known for a long time, but according to the president, it has been known as a poor organization. “That kind of reputation isn't worth saving” Harden said. But now the past becomes involved.

Ag-Dom as it was can be recalled by professors who were undergraduates in the College and have been connected with Ag-Dom, student life, and the Colleges for most of the 20 to 25 years since their graduation.

In the past quarter century, the professors recall, Ag-Dom hasn't filled any vital needs of the student body. This, in part, is due to the size of the Colleges. When the Colleges were so small that everybody knew everybody else, it was a lot easier to communicate and create a group spirit.

There was a time, a professor remembers, when Ag-Dom dances were very popular and well attended.

A training program for club officers existed for a while. The program broke down when the student-founders graduated without transferring their interest in it.

Until about five years ago, it was pointed out, Ag-Dom was responsible for coordinating the dates and times for all club meetings—thus avoiding conflicts.

In spite of any proposed changes or past weaknesses, the professors concluded, Ag-Dom provides a laboratory where students can learn such things as parliamentary law, organization principles, committee structure, and personal relations. If only in this capacity, Ag-Domecon Council can fill a vital need. ELR

### And as it might be

THE VALUE OF any campus organization includes those specific services it performs. Beyond this, however, is a worth that is often overlooked—particularly, we feel, in the case of Ag-Domecon Council.

An organization of this type offers students something that could be of real value to them: a beginning toward deeper and more significant living at Cornell.

We do not propose that Ag-Dom in itself embodies this broad scope of college life, but we do feel it could be instrumental in finding students interested in campus activities. In this sense, we think of Ag-Dom as a means by which Ag and Home Ec students have the opportunity to broaden their interests and themselves.

Many of the Upper Campus students are not interested in this kind of growth. We know some who are, however, and more who might be. For these, perhaps few, a broad-minded Ag-Dom Council can be justified and is necessary to student life. THW

### Countryman Compet Elections

WE ARE happy to announce the election of the following people to the *Countryman* staff:

Anne Dalrymple, Gale Steves, Phyllis Norton, Virginia Lange, and Alice Fried, all '64.

More new staff members from the class of '64 are: Frank Fee, Phyllis Rivkin, Linda Goldreich, Nancy Fraser, Ernie Smith, and Richard Mandell.

Also newly elected are: Jim Sample and Susan Rauchway, '63 and Tom Wickham, '62.

## Pseudo - Yule and Giant Toads

by Zilch

ZILCH HAS received word from several *Countrymaniacs* of the past. G. P. Hirsch (Editor, 1957-58) is at the U. of Penn's school of dentistry. Arthur J. Dommen (assoc. editor 1953-56) is the U.P.I. Bureau Manager in Saigon, Vietnam. Zilch got the foregoing information from Dana Dalrymple (Editor, 1953-54) now studying at Michigan State U's Ag Ec department.

ZILCH'S NEWS ANALYSIS: A home economics professor at the U. of Texas believes that when little brother dips his sister's pony tail into the ink, "he may be expressing deep affection and respect." The

### LITTLE MAN ON CAMPUS



"I UNDERSTAND THEY'VE HAD A TOUGH TIME FINDING A QUALIFIED HOME EC TEACHER."

Texas-prof continues that only when the fighting becomes extreme should parents become concerned. How many pints of blood are enough?

Under the headline, "Any Takers," the *Rutland (Vermont) Herald* carried a story about a "White-haired grandmother who claims the rocking chair championship of the world." Her record is 100 consecutive hours! Zilch wonders if she made the Olympic team.

In Queensland (Australia), they're using giant toads to eat sugar-cane beetles. This is fine for the sugar cane industry, but all is not peaceful on the toad front. Late homecomers object to the unearthly appearance of the toads gathered around lamp-posts, catching bugs.

Zilch noticed a press release that started, "If you see a snake in the grass, relax." When Zilch perceives such phenomena, he is usually in a state of induced relaxation, anyway.

With the vast system of research and crop reporting at the disposal of USDA, and the trained personnel studying trends in crop conditions, a recent issue of *Agricultural Situation* ran a lead story called, "Will this be a record crop year?" In answer to the question posed in the head, the lead paragraph expertly predicted, "Maybe, yes. Maybe, no."

Zilch would like to extend a special greeting to the newly elected Freshman representatives to Ag-Dom Council. The Ag College donations are Jonathan Roth, and Joe Bowen, while the Home Ec rep is Kristine Blixt. Zilch thinks the ratio is bad, but the choice good.

Zilch knows that he should wish all his loyal readers a merry Christmas . . . but he can't. The whole trouble is with something the Editor calls "psychological Christmas." You see, Zilch is writing this column two weeks before Thanksgiving. But as far as Zilch's column is concerned, it is two weeks before Christmas . . . because that's when you read it . . . even though it's really before Thanksgiving.

So while Zilch enjoys his pre-Thanksgiving, pseudo-yule, he hopes that everyone else will have a happy one of the more timely variety—and Zilch hopes the Editor gets a big can of Metrecal in his stocking.

### COVER STORY

Our merry Christmas to you is this month's cover designed by Linda Goldreich '64, who was just elected to the staff.

WARM PILE LINED CLOTHING ARE PERFECT FOR WINTER

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# Testing Milk's Taste

Cornell professors are trying to find out what makes milk's taste and how to change it. One piece of equipment is a "holy" cow.

by Susan Rauchway '63

**A**IR-CONDITIONED cows, the dairy industry department, and a group of graduate students are all working for the cause of milk flavor improvement.

Milk improvement programs are faced with an ironical problem. On

one hand, it would be hard to find a cleaner, more wholesome, food product than fresh milk. However, the fact remains that some people drink lots of milk, others drink less, and some drink none at all.

Since the purity of milk is at

such a high standard today, most consumer's complaints about milk arise from occasional off-flavors. Most off-flavors are barely detectable, but it was concluded that they may seriously lower the milk consumption of those people who

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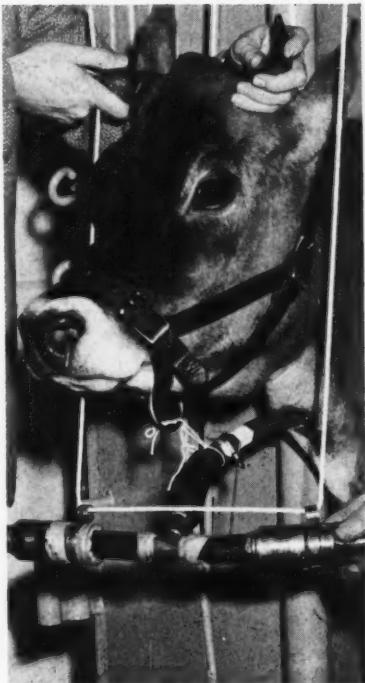
**AND You Can Save, Too**

are particularly sensitive to flavor variations.

Improving the taste of milk requires a knowledge of the nature

One of the experimental cows—notice the windpipe apparatus.

ETI



and transmission of milk flavor, the biochemical processes in the cow that produce and change flavor, as well as the investigation of the dairy cow's food and environment.

The flavor-improvement experiment at Cornell is being conducted under the supervision of Professor William F. Shipe, of the dairy industry department, and Professor Robert Watson Dougherty of the

College of Veterinary Medicine.

Each of the two cows used in the experiment is equipped with a set of tubes inserted into the rumen and windpipe, through which flavoring agents may be introduced. With this apparatus and subsequent tasting, it is possible to determine if and when these additions have any perceptible effect on the flavor of the milk.

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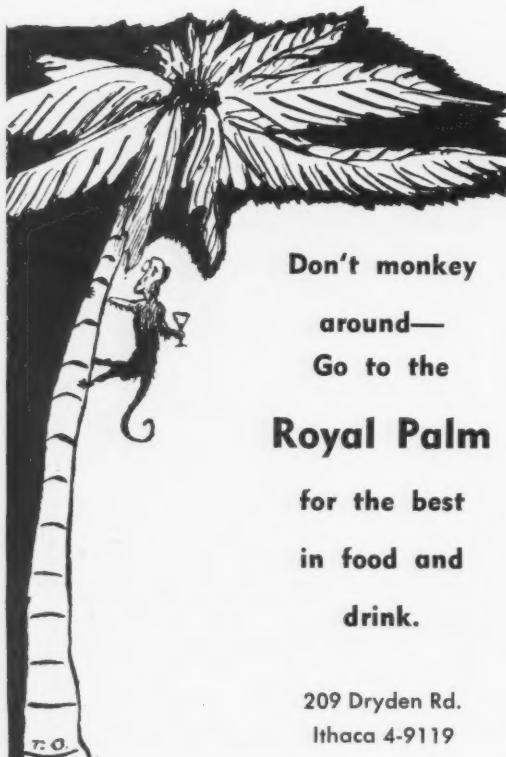
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Onion and garlic flavors can be air-bubbled directly into the lungs of the cow, as well as into the rumen. Bulkier materials, such as grass and corn silage, require the use of large aerators and hydraulic presses to extract the juices before they are introduced into the cow's lungs.

Artificial fruit flavors, and organic matter, are also included in the tests.

#### **Off-Flavor Detection**

When onion and garlic flavors were used, the panel detected an off-flavor, but could not identify it. In the case of corn silage, the judges described the taste in such terms as "sour," "acetic acid," "acetone," "molasses," and "feed." Banana and coconut esters produced an off-flavor, pure vanilla extract resulted in a slight off-flavor, and cherry, camphor, butyric acid, and urine produced none at all.

The conditions of the experiment are carefully controlled: each judge samples the milk independently. This eliminates any possible influence of previous knowledge, and the observations of fellow judges. The results, however, are complicated by the frequent inability of the judges to discriminate among different flavors, and their varying "thresholds of taste."

#### **Evidence From Study**

Although no definite conclusions have been drawn from the experiment, there is evidence that some off-flavors may be produced in the cow's rumen. This may be attributed to the enzymatic action of bacteria which live in the rumen.

Accurate identification of milk flavor will be a great step toward the qualitative improvement of milk. It will also be a major advance in dairy research—in understanding the physiology of milk production, and the chemical composition of this very complicated substance.

Milk flavor may also be influenced by environmental factors. These effects are hard to study, since milk is a highly sensitive product, and may be affected by countless environmental variations, which express themselves from barn to table.

#### **Oxidation Problem**

A major problem in the processing of milk is caused by oxidation. As Professor Shipe explains, oxidation of milk is catalyzed by copper or by sunlight. Oxidation is less serious in the spring, when the cows are changed from silage to green feed, which contains antioxidants.

Oxidation may be retarded by the use of amber milk bottles. Consumers, however, tend to object to the "beer bottle" appearance of such containers. Moreover, since a majority of people buy homogenized milk today and don't have to see a "cream-line," wax containers are quite acceptable.

The feelings of consumers—the people who drink the milk—are especially important. No matter how loaded with food value milk, or any other food product is, people will not buy it unless it looks, smells, and tastes good.

Although milk is a combination of chemicals, and can be studied in a scientific laboratory, the human factor in its production and consumption must be considered. Our knowledge of how milk is affected must be very specific. One reason is that the farmer who wants to improve his milk's flavor must know exactly what steps to take and the reasons for taking them.

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## College Open House

by Bernard Curvey

**A**LUMNI ASSOCIATION members and the College of Agriculture were host to about 130 high school students, parents, and guidance counselors at the fall College Open House.

The purpose of the Open House, held on Saturday, October 29, is to bring interested students to the College Campus so that they may see the facilities available to them and to inform them of the varied educational opportunities in the College of Agriculture.

The program opened at 9:30 a.m. with refreshments and registration in the lounge of Riley-Robb Hall.

At 10:00 a.m. the group assembled in room 125 Riley-Robb Hall, where they were welcomed by Thomas C. Watkins, Director of Resident Instruction.

Immediately following there was a panel discussion by five faculty members on the "Educational Opportunities in Agriculture." The fields of studies discussed and the five faculty members from the respective departments were: Animal Production, Professor S. E. Smith; Plant Production, Professor E. B. Oyer; Natural Sciences, Professor B. L. Herrington; Agricultural Business, Professor Wendall Earle; and Agricultural Engineering, Professor O. C. French. After the panel discussion, the group divided into several interested groups for a question and answer period with several departmental representatives present to answer specific questions.

Dean Charles E. Palm greeted the group at a

luncheon held in the Stocking Hall Cafeteria. After the luncheon, Neanson Hopper '39, Superintendent of Farm and Food Labor, in the State Labor Department, presented a talk on "An Alumnus Appraises a College Education for the Agricultural Industry."

The afternoon session opened with a bus tour of the Campus. Members of the Ag-Domecon Council acted as guides.

At 2:30 p.m. the group assembled to hear five Cornell students talk about "Student Life at Cornell." The panel members were: Judith Reamer '61, Manley Makenny '61, Alan Marion '61, James Bobnick '61, and Ian MacLeod '61. After the panel discussion the panel was open for questions from the High School Seniors.

The program closed with a short summary of the day's activities given by Director T. C. Watkins and an informal snack in the Seminar room of Riley-Robb Hall.

Russell Cary, President of the New York State College of Agriculture Alumni Association, was master of ceremonies at the noon luncheon and chairman of the afternoon session.

Similar programs are planned twice yearly for interested high school students.

The Office of Resident Instruction encourages any high school students interested in the College of Agriculture to visit with their guidance counselors if they have any questions concerning the various fields of study or admission requirements.

## Scholarships for High School Seniors

**H**IGH SCHOOL seniors who plan to go to college next fall may be interested in more than 40 scholarships which will be awarded to freshmen entering the New York State College of Agriculture at Cornell University in September, 1961.

Bernard A. Curvey, admissions counselor, says one out of every 3 or 4 applicants usually receives one of these scholarships. Each is valued at \$200 or more. The awards are made primarily to outstanding farm boys and girls and to 4-H members who want to study agriculture, who are in financial need, and who have good high school records.

Ten of the awards are Carl E. Ladd Memorial Scholarships, worth \$300 each, and specifically for

young men and women from New York State farms. The Sears Roebuck Agricultural Foundation has also provided fifteen \$300 scholarships for farm-reared freshmen. These awards are made on the basis of financial need, leadership, and scholastic promise in the field of agriculture.

In addition, there are two awards for 4-H members given by the Esso Standard Oil Co. These scholarships are worth \$200 a year for four years—a total of \$800. Several awards are also available to boys and girls from specific areas of the State. For example, the LaMont family of Albion has provided two scholarships for students entering college from Orleans County.

Students can get more information about these scholarships from their high school guidance counselor. They must act soon, however, for applications must be on file at the College by Feb. 15, 1961. Application blanks may be obtained from local guidance counselors or by writing to the Office of Resident Instruction, Roberts Hall, Ithaca, N.Y.

# Evolution of the Christmas Evergreen

**The early ancestor of the Christmas tree was the green date palm. Through the centuries it has become the symbol of a happy family in a free world.**

by Gerald Kral '62

**T**HIS MONTH YOU and I, along with a hundred fifty million other people, will get Christmas tree fever. In the midst of street corner Santa Clauses, department store Santa Clauses, toyland-, barbershop-, and city-sponsored Santa Clauses, city dwellers will converge upon their shopping centers to select a Christmas tree. It will be pushed, shoved, or mashed into an automobile. Main Street, U.S.A. will resemble a mobilized pine forest.

Meanwhile, rural folk will attack their farm woodlots with axes, saws and if still available, old Dobbin and the sleigh. All this and a hundred fifty million Christmas trees moving into man's domain.

Where did all this begin and how did it become so popular? "Custom and tradition," you say? Sure, that's true enough but just where did this custom begin? With the aid of a little book entitled, *All About Christmas* by Mamie Krythe, a radio station and some folklore,

rumor and fact, the story of the Christmas tree can be told.

The custom of decorating a tree with trinkets, tinsel and colored lights is certainly not a new one.



Early Egyptian Christmas tree—the date palm

It began with the first great civilization—the Egyptians. Once a year, to honor the solstice, the *green date palm* was decorated with gold and silver. Romans sanctified their god of fruitfulness, *Bacchus*, by hanging

miniature masks of him on their fruit trees—especially the grape vine. Wine distilled from such sanctified grapes was believed to increase both virility and fertility. The Druids of Northern Europe, a mystical breed of humanity believed to be the originators of the human sacrifice and orgy, yearly honored the evergreen as a symbol of the immortality of their chief god, Odin. The evergreen was decorated with jewels, religious relics, and the blood of a human sacrifice.

The decoration of trees thus had its beginning in the mysticism and antiquity of the past. It was born around the rites and rituals of pagan tribes—a romantic and unrealistic birth. But the custom was still isolated.

At the turn of the fourth century, the unifying force became apparent. Christianity was rapidly spreading throughout the civilized



Second, the year 'round greenness of the evergreen symbolized immortality to the peoples of that time and place.



Druid sacrificial sword to honor the evergreen

The custom spread through Northern Europe reaching Germany. From Germany it spread to Finland, Denmark, Sweden and Norway reaching England sometime in the middle of the nineteenth century. A princess introduced the custom to Paris. She was at a loss as to what she should give the prince on Christmas Eve. A few days before Christmas she heard a minstrel sing of the Christmas tree. The idea delighted her and she asked the minstrel to decorate a tree for her. The deed was done using jewels from the castle store. On Christmas Eve a surprised and very happy prince showed the people of Paris his gift. In less time than you can say cock-a-joo, every available evergreen was being paraded down the streets of Paree. The entire Christian world had now accepted the custom.

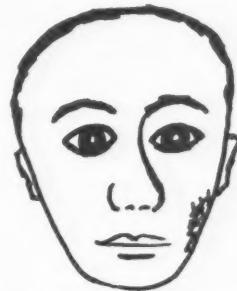
The Christmas tree reached America at about the same time it reached England. Charles Follen, a German professor at Harvard in 1824, set up the first tree in America. It delighted his nieces, nephews, and neighbors. The custom caught on. It was still slow to spread, until churches entered the picture. In 1851, the first tree was set up by Pastor Schwann of Cleveland, Ohio. The parish threatened him with bodily harm for they still considered it a pagan practice. The good Pastor did a lot of frantic research and proved the custom to be a Christian one. Soon other churches followed suit. The custom spread like the gold rush fever of that time.

Since its early beginning in America, the Christmas tree has entered all walks of life. It has even been in the political limelight a few times.

Around the close of the nineteenth century the White House had adopted the custom of setting up a Christmas tree. And then

Teddy Roosevelt became president. Teddy, noted for his campaign to preserve our natural resources, promptly banned the use of a Christmas tree in White House festivities. Shortly afterwards he was surprised and very angry to discover that his two sons, Archie and Quentin, had set up a secret tree in Archie's room. A fatherly ultimatum was passed. Archie and Quentin, as a final resort, appealed to Gifford Pinchot, America's first conservation-minded forester. Pinchot persuaded Teddy that if young trees were properly cut, more good than harm could be done. So the White House and the Christmas tree lived happily ever after.

Today the Christmas tree custom can be called nothing short of sensational. In 1950, Northport, a shopping center close to Seattle, set up a fully decorated tree, 212 feet tall and weighing 25 tons. Rockefeller Center, in New York City, each year puts up a gigantic tree. Recently they put up a 90



Mask of the Roman God Bacchus

foot Norway pine covered with 7,500 colored lights requiring seven miles of wiring. Three million people visited the tree that year.

On Michigan Avenue, in Chicago, there stands a three story telephone pole. During December, several hundred regular sized trees are lashed to it in the shape of one gigantic tree. It is literally smothered with tinsel (1200 pounds of it) and lights. Rising hot air, created by the thousands of common household bulbs, sends the tinsel into a glittering mass of silver. The tree can be seen for several miles.

Even though these spectacles fill us with awe, the best tree is the little evergreen standing in millions of homes. Decorated by noisy imps, with tinsel around their ears, gleaming ornaments in their hands and thoughts of Santa in their heads, the Christmas tree has become the symbol of the happy family in a free world.

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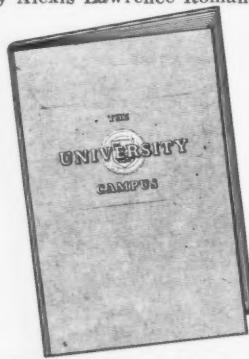
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Professor William J. Hamilton, Jr.

## Cornell's Conservation Comedian

A major in Conservation—A minor  
humor—A unique personality!

by Jane P. Doyle '62

TENSE WITH expectation, the doctoral candidate waited for the first question on the long, three hour exam. Solemnly, Professor Hamilton cleared his throat. As the student listened for a detailed question on the anatomy of some obscure mammal, the professor said, "Tell me. In poker, does three of a kind beat two pair?"

A serious moment became a funny one, the student relaxed and passed his exam with flying colors.

Professor William J. Hamilton



Professor Eadie

Professor William J. Hamilton, Conservation Comic

Jr.'s ability to put people at ease is well known among his students in the conservation department. His classes are conducted in a relaxed fashion, although everyone listening must be constantly on their toes. Professor Hamilton likes nothing better than to trap the unsuspecting student.

"Animals can be followed and their presence recognized in several ways," he told a field trip class one day. "The droppings are very characteristic and so are the footprints." Stopping near a set of rabbit tracks he squatted down and placing his hand in the print said, "By golly, this fellow was by here only a minute or two ago—the tracks are still warm." Several students near the

front placed their hands in the tracks and nodded assent.

Thought of as a jokester by many of his students and associates, few realize the other side of the friendly man with the beat-up hat. Often referred to as the top mammalogist in the East and a foremost field biologist, he is known and respected by scientists all over the country. In 1951, the Society of Mammalogists elected him president and four years later, he was awarded the same honor by the Ecological Society of America.

For several years he was editor of *Ecological Monographs* and in 1959 completed a three-year term on the National Science Foundation advisory committee whose members review requests for grants to study biological science.

### Insects, Mice, and Birds

While still in high school, Hamilton planned to attend Harvard. "Then one day," he recalls, "I saw a catalogue from a school that offered courses about insects and mice and birds." In 1926 he graduated from this school—Cornell—with a B.S. in Biology and took an assistantship.

Professor Emeritus Albert H. Wright of the zoology department knew his interest in vertebrate zoology and when a position became vacant, asked Hamilton to become his assistant. "From then on," says Professor Wright, "the students learned as much from my assistant as they did from me."

After doing graduate work, Professor Hamilton traveled to South America to do research on the mammal variations found there. But he decided that the traveling wasn't worth it. He feels that, "There's a lot to be studied in my own back yard." And he has stuck to this theory ever since. Feeding habits of mammals of eastern United States have been Professor Hamilton's major study.

Although known primarily for his work and studies on the food of

mammals, Hamilton has also gained considerable skill as a marksman. Oliver H. Hewitt, professor of wildlife management at Cornell, tells of the time, two years ago, when Hamilton stalked a large, prong-horned antelope for nearly half a mile before he could get a good shot.

Anxious to preserve both the meat, and the head for a trophy, Hamilton took careful aim and downed the buck with one well-placed shot through both ankles. The meat was undamaged and the head now hangs between the windows over his desk.

#### Less Academic Side

More of Professor Hamilton's less academic side showed up in an episode involving Dr. Perry Gilbert, professor of Zoology. Professor Gilbert wanted to study under Dr. Brazier Howell, noted anatomist at Columbia University, but had never met him. Hamilton, aware of this, decided to have a little fun.

Calling Gilbert into his office, he introduced an astonished visiting farmer as "Dr. Brazier Howell." Gilbert, very impressed spent the next hour showing his dismayed guest around the building. It wasn't until much later that he learned the real reason why his visitor had no comment to make throughout the whole tour.

Another of Professor Hamilton's humorous interests is Major Hoople of comic-strip fame. And like Major Hoople, Professor Hamilton enjoys telling about his unusual and varied experiences. "When I was ambassador to Spain", he will begin, or, "Do you see that deer head on the wall? I killed it several years ago on Turkey Hill . . . with a javelin."

But one of his favorite stories concerns a trip that he and Professor Hewitt took to study black bears in the Adirondacks.

#### Bear Thief

One night a large female bear stole all the meat from the cache. One of her forepaws became caught in a large rat trap near the food and made her trail very distinctive. The next morning the two men set out after the thief. "Around noon," Hamilton reports, "crossing the north slope of Whiteface Mountain, we heard a loud roar and a huge avalanche came thundering down on top of us. We were caught and swept along in the wall of snow. Professor Hewitt was lucky and managed to dig himself out and get back to camp—but I have never been heard from since."

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**THE 1961  
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# What's Industrial About Corn?

A variety of industrial uses increases demand for this versatile grain.

by Jane E. Brody '62

WHILE downing an ice cream soda or opening the foil wrapping of a pack of cigarettes, has the image of a corn field ever flashed across your mind? If not, you're not alone. But, an association between corn and ice cream and corn and aluminum foil does, in fact, exist.

Why is this so? It's all a matter of economics. The demand for agricultural products is relatively inelastic. What this means is that people will buy a certain amount of a given product, no more, no less. Even if their income increases, purchase of the product remains essentially the same. A person who, for monetary reasons, subsists mainly upon fish and is getting all he needs, will not buy more fish should his financial position improve. He will buy steak instead.

Such a situation is especially true of agricultural products. Some, however, are more inelastic than others. Corn as compared with tomatoes, for example, is relatively inelastic. People can eat just a certain amount of corn and no more. A price drop can't stimulate much further consumption.

The case is a bit more complicated when you're talking about farm animals, the main consumers of corn in the United States, since

Industrial corn, unlike the sweet corn we eat off the cob, often grows as high as a small house

Dr. Ralph Krenzien

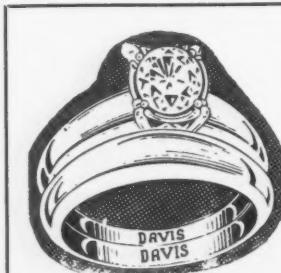


the buyer isn't the consumer. But, in general, the same principle holds —when hogs have had enough corn, they have had enough corn. And in a country which annually produces a surplus of this commodity, something must be done with that left over after man and his animals have had their fill.

The solution—industrialization. The introduction of corn into industry provides an excellent example of how effective this solution is. As early as 1848, the first factory for the manufacture of corn starch was established. Since that

time, the corn industry has grown by leaps and bounds, both in quality and quantity. Today 500 million bushels of corn a year, 15 percent of the total national crop, are converted into products which bear little or no resemblance to corn, or are utilized by industries which on the surface, have no relation to agriculture.

Of these 500 million bushels, feed manufacturers, the "dry milling" industry (corn meal, breakfast foods, etc.), distillers, and others take their lot, leaving 150 million bushels to be processed by corn re-



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fineries. The refineries' products range from sugars used in baking to growth media for penicillin molds. Both food processors and non-food manufacturers utilize the refinery products to make a wealth of things essential to everyday life.

Cakes, aspirin, paper, adhesives, candy, salad dressings, leather, medicine capsules—all these and many more have in some way incorporated the little yellow corn kernel into their manufacture.



The corn kernel, seemingly a simple entity, is valuable because of starch. Starch has been important to mankind since the beginning of civilization. Eventually, corn was discovered to be a resource of this nutrient, and the corn refining industry was established to tap this resource. Amid the attempts to extract starch from the corn kernel,

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ways to use the byproducts of the refining process were developed. Now the gluten, hull, germ, and the soluble constituents of the kernel can be converted into products useful to man, making the entire refining process much more profitable.

Today, observes the Corn Industries Research Foundation (CIRF), "almost everything you use, everything you wear, everything you touch each day of your life," is in some way intimately associated with a product of corn.

But, as CIRF sees it, "corn refining contributes more than its products to the economic life of the

nation." As soon as the corn leaves the farm, it becomes a job for thousands of employees in grain elevators, on the railroads, and in the plants and offices of the corn refining industry. Leaving the corn refining plants each day are products that in some way create employment for other thousands—people of the paper-milling industry, commercial laundries, breweries, bakeries, groceries, and many other walks of life.

Manufacturers, in searching for ways to profitably use surplus corn, have made the corn industry an integral part of our economy.

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## The Meat You Eat-- How It Dies and Why

by Jack E. Hope '61

FOR YEARS sentiment has run high, for the use of "humane" methods in the slaughter of livestock. Passage of the Humane Slaughter Law by the 85th Congress has met with hearty approval by most humane societies but its immediate effects upon the meat industry cannot be termed entirely beneficial.

The language of this law (Public Law 85-765) requires that meat packers who sell products to the Federal Government must employ designated means of immobilizing or rendering unconscious the livestock which they kill. Four methods of immobilization are recognized as humane: electrical, mechanical, chemical—such as  $\text{CO}_2$  anesthetic-

zation, and gunshot.

Prior to enactment of PL 85-765, slaughter of the smaller types of livestock was accomplished with a knife stroke, without "stunning". Unconsciousness and then death, due to oxygen starvation of the brain, occur quickly, probably with little sensation of pain.

Cattle, because of their size, are generally stunned prior to slitting the throat. Many packers have been using stunning methods now approved under the Humane Slaughter Law, although the sledge hammer has proven to be a favorite tool in some plants. The hammer eventually produces an unconscious state, but it is not uncommon that "repeated application" is required.

Therefore, the principal changes precipitated by this law are the immobilization of smaller livestock prior to slaughter and the use of approved, standardized methods to render large animals unconscious.

Adherence to humane slaughter means that meat packers have to remodel portions of their plants, install proper equipment and train personnel in the operation of the new devices. The choice of one of the four methods of immobilization depends upon many factors and a suitable technique in one plant may prove expensive or otherwise impractical in another. The choice of passing operation expense on to the consumer rests with the individual packing company.

Facilities for carbon dioxide immobilization are expensive compared to other techniques, but several plants have made satisfactory adaptations and are using this method, mainly for hogs. In fact, anesthetization eliminates the need for "shackling" an animal before bleeding. Placing a chain around the leg of an excited animal is a precarious occupation and the use of  $\text{CO}_2$  has resulted in a lower turnover rate of manpower at this end of the production line!



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Steak on the way to the slaughter house.

Some packers use electrical immobilizers which send a current through an animal's brain, producing unconsciousness. The operator must hit the right spot on the animal's skull with an electrically energized shaft or rod as each beast passes through a chute. At a rate of three hundred animals an hour, this job takes speed and accuracy. If the electrodes miss their mark or if animals do not file evenly past, operations are seriously interrupted.

Concussion and penetration implements for mechanical stunning were familiar to packers long before PL 85-765 took effect. Sheep and cattle are both easy to stun mechanically since they have uniform skull structures. Considerable research needs to be done before these procedures can be suitably used on hogs, since their skulls change as the animal matures.

Although gunshot has been widely used, especially by smaller plants, most large packers consider it unsafe for fast-moving operations.

A very definite accomplishment of the Humane Slaughter Law is the stimulation of research in the areas of post-mortem changes in meat, measurement of pain in slaughter animals, elimination of bruising and blood clotting as a result of mechanical stunning, evaluation of immobilization procedures, and the handling of animals prior to slaughter. USDA researchers are zealously seeking answers and solutions to these problems for until they do, the benefits of the Humane Slaughter Act are open to debate.

Although this law does not apply to meat companies who do not peddle their wares to the Federal Government, several states have now enacted similar laws. With this precedent, humane slaughter may eventually apply to all meat packers. In respect of religious requirements, Kosher establishments have been exempted from humane slaughter requirements.

In the Cornell Department of Animal Husbandry, mechanical stunning has been in use on beef for some time. In keeping with modern slaughter methods, a CO<sub>2</sub> immobilization pit will be used in the new Ag Hus Building.

The Humane Slaughter Law has brought problems to the meat packing industry. Industry research and experimentation, when combined with the cooperative efforts of government, livestock producers, humane associations, researchers, religious groups and the general public, can make humane slaughter a usable tool.

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- **SOIL TEST** — An unexpectedly large number of New York farmers are getting low yields because they aren't using enough fertilizer, according to a College of Agriculture survey.
- **APPLE STORAGE** — Record numbers of apples are going into controlled atmosphere storage, from which they'll emerge next spring as fresh and tasty as the day they went in, according to College of Agriculture fruit specialists.
- **PRE-BUILT DISPLAYS** — A technological revolution in retail food distribution that will mean lower food prices and higher quality products is foreseen by Prof. Max E. Brunk. He predicts crops will be arranged for store display right on the farm.
- **WESTERN CIVILIZATION** — The threat to our Western civilization lies not so much in what the communist world can or will do, but what we can and will not do, Prof. Erie Bronfenbrenner stated at a recent meeting of the Southern District Home Economics Association.
- **ATOMIC GROWTH REGULATOR** — Cornell researchers are using atomic radiation to study growth regulators that control fruit drop on apple trees.
- **ENERGY OF RAIN** — Prof. George R. Free, U.S. Department of Agriculture project leader, and his assistant are simulating rain in an attempt to test the effects of rain energy on soil.
- **EGG PRICES** — will stay up for another five months, predicts Jonathan Tobey.
- **GRAPE HARVESTER** — A mechanical grape harvester that can do the work of more than 25 men has been developed at the College of Agriculture.
- **WHIPSCORPION SPRAY** — Cornell scientists have discovered that the defensive chemical spray of the whipscorpion, a creature that lives in southwestern U.S., includes many of the qualities of a perfect commercial insect spray.
- **CHILD PUNISHMENT** — A study recently completed at the College of Home Economics may help show if there is any relationship between the amounts and kinds of punishment a child is given and the way he behaves.
- **FOOD STORE MANAGERS** — A survey showing what's being done to meet America's need for trained store managers and executives has been completed at the College of Agriculture.

For further information on any of the above items contact the Cornell Countryman.

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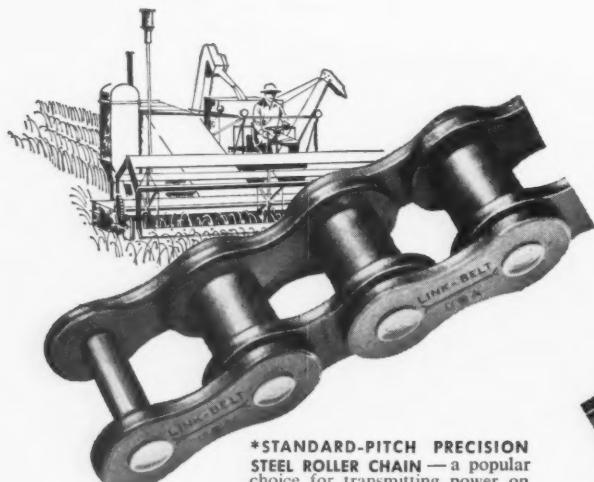
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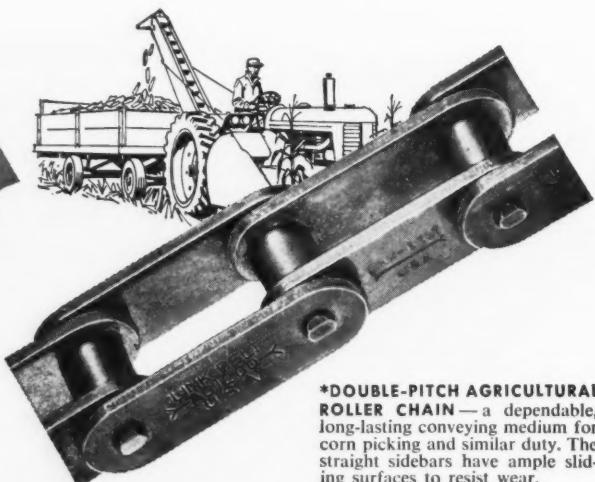
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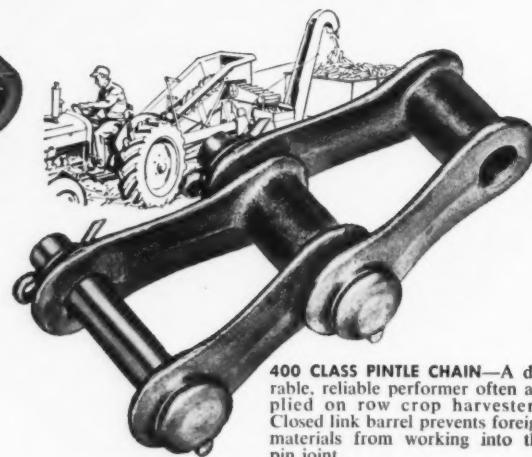
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